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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,475	09/23/2003	William Gardner	020481/QUALP821USA	4832

70797 7590 07/23/2008

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EXAMINER	
CHAWAN, VIJAY B	
ART UNIT	PAPER NUMBER
2626	

NOTIFICATION DATE	DELIVERY MODE
07/23/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/669,475	GARDNER ET AL.	
	Examiner	Art Unit	
	Vijay B. Chawan	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the appeal brief filed on 5/13/08, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Richemond Dorvil.

/Richemond Dorvil/

Supervisory Patent Examiner, Art Unit 2626

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 26-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 26 -30 are directed toward a machine readable medium containing codes to extract and convert, which implies that it is an computer algorithm, which is non-statutory under 35 U.S.C 101. Claims 26-30 are non-statutory under the most recent interpretation of the Interim Guidelines regarding 35 U.S.C.101 because this claim is toward a computer program, and as claimed, does not define any structural and functional interrelationship between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized (Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760; Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada (6,038,529) in view of (White et al., (6,408,272).

As per claim 1, Harada teaches an apparatus for use in transmitting digital data through an audio channel the apparatus comprising:

a data coder configured to convert the digital data into one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52); and

Harada, while teaching a data coder that is configured to convert the one or more types of sound parameters into acoustic sound waves to acoustically transfer the digital data does not specifically teach a sound synthesizer coupled to the data coder. White et al., do teach a sound synthesizer that is coupled that is coupled to a transceiver that does extract speech parameters and receives and transmits acoustic data (Fig.2, items 28, 34 and 42). Therefore it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the processing component of White et al., in the apparatus of Harada, because this would provide the user with the capability to receive, and respond to, directions, commands, instructions, or requests issued verbally by the human user (White et al., Col.1, lines 36-38).

As per claim 2, Harada teaches the apparatus of claim 1, further comprising: a storage medium configured to store one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the data coder is configured to convert the digital data into the one or more types of sound parameters in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 3, Harada teaches the apparatus of claim 2, wherein the storage medium comprises a look up table that predefines the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Col.9, line 24 – Col.10, line 62).

As per claim 4, Harada teaches the apparatus of claim 1, wherein a sound parameter represents one value or a range of values representative of user authentication information (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 5, Harada teaches the apparatus of claim 1, wherein the one or more sound parameters comprises at least one speech parameter representative of artificial speech (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 6, Harada teaches an apparatus for use in receiving digital data through an audio channel, the apparatus comprising:

a sound analyzer configured to receive sound and to extract one or more types of sound parameters from the received sound (Figs.3-4, Col.4. line 51-Col.5, line 52).

Harada, while teaching a sound analyzer that is configured to convert the one or more types of sound parameters into acoustic sound waves to acoustically transfer the digital data does not specifically teach a sound synthesizer coupled to the data coder. White et al., do teach a sound synthesizer that is coupled that is coupled to a transceiver that does extract speech parameters and receives and transmits acoustic data (Fig.2, items 28, 34 and 42). Therefore it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the processing component of White et al., in the apparatus of Harada, because this would provide the user with the

capability to receive, and respond to, directions, commands, instructions, or requests issued verbally by the human user (White et al., Col.1, lines 36-38).

As per claim 7, Harada teaches the apparatus of claim 6, further comprising: a storage medium configured to store one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the data decoder is configured to convert the extracted one or more types of sound parameters into the digital data in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 8, Harada teaches the apparatus of claim 7, wherein the storage medium comprises a look up table that predefines one or more sets of relationships between the bit patterns and the one or more types of sound patterns (Col.9, line 24 – Col.10, line 62).

As per claim 9, Harada teaches the apparatus of claim 6, wherein a sound parameter represents one value or a range of values representative of user authentication information (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 10, Harada teaches the apparatus of claim 6, wherein the extracted one or more sound parameters comprise at least one speech parameter representative of artificial speech (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 11, Harada teaches a method for use in transmitting digital data through an audio channel, the method comprising: converting digital data to be transmitted into one or more types of sound parameters; and converting the one or

more sound parameters into acoustic sound waves to acoustically transfer the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 12, Harada teaches the method of claim 11, further comprising: storing one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein converting digital data to be transmitted comprises converting the digital data into the one or more types of sound parameters in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 13, Harada teaches the method of claim 12, wherein storing the one or more sets of relationships comprises storing a look up table that predefines one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Col.9, line 24 – Col.10, line 62).

As per claim 14, Harada teaches the method of claim 11, wherein a sound parameter represents one value or a range of values representative of user authentication information (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 15, Harada teaches the method of claim 11, wherein the one or more sound parameters comprises at least speech parameter representative of artificial speech (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 16, Harada teaches a method for use in receiving digital data through an audio channel, the method comprising: extracting one or more types of sound parameters from received acoustic sound waves; and converting the extracted

one or more types of sound parameters into the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 17, Harada teaches the method of claim 16, further comprising: storing one or more sets of relationships between bit patterns and the one or more types of sound parameters; and wherein converting the extracted one or more types of sound parameters comprises converting the extracted one or more types of sound parameters into the digital data in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 18, Harada teaches the method of claim 17, wherein storing the one or more sets of relationships comprises storing a look up table that predefines the one or more sets of relationships (Col.9, line 24 – Col.10, line 62).

As per claim 19, Harada teaches the method of claim 16, wherein a sound parameter represents one value or a range of values representative of user authentication information (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 20, Harada teaches the method of claim 16, wherein the extracted one or more sound parameters comprise at least one speech parameter representative of artificial speech (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 21, Harada teaches an apparatus for use in transmitting digital data through an audio channel, the apparatus comprising: means for converting digital data to be transmitted into one or more types of sound parameters; and means for converting

the one or more types of sound parameters into acoustic sound waves to acoustically transfer the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 22, Harada teaches the apparatus of claim 21, further comprising: means for storing one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the means for converting converts the digital data into the one or more types of sound parameters in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 23, Harada teaches the apparatus of claim 22, wherein the means for storing stores a look up table that predefines one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Col.9, line 24 – Col.10, line 62).

As per claim 24, Harada teaches an apparatus for use in receiving digital data through an audio channel, the apparatus comprising: means for extracting one or more types of sound parameters from received acoustic sound waves; and means for converting the extracted one or more types of sound parameters into the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 25, Harada teaches the apparatus of claim 24, further comprising: means for storing one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the means for converting converts the extracted one or more types of sound parameters into the digital data in accordance

with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 26, Harada teaches the apparatus of claim 25, wherein the means for storing stores a look up table that predefines the one or more sets of relationships between the one or more types of sound parameters (Col.9, line 24 – Col.10, line 62).

As per claim 27, Harada teaches a machine readable medium used for transmitting digital data through an audio channel, the machine readable medium comprising: codes for converting digital data to be transmitted into one or more types of sound parameters; and codes for converting the one or more types of sound parameters into acoustic sound waves to acoustically transfer the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

Harada, while teaching a sound analyzer that is configured to convert the one or more types of sound parameters into acoustic sound waves to acoustically transfer the digital data does not specifically teach a sound synthesizer coupled to the data coder. White et al., do teach a sound synthesizer that is coupled that is coupled to a transceiver that does extract speech parameters and receives and transmits acoustic data (Fig.2, items 28, 34 and 42). Therefore it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the processing component of White et al., in the apparatus of Harada, because this would provide the user with the capability to receive, and respond to, directions, commands, instructions, or requests issued verbally by the human user (White et al., Col.1, lines 36-38).

As per claim 28, Harada teaches the medium of claim 27, further comprising: one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the codes for converting converts the digital data into the one or more types of sound parameters in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 29, Harada teaches a machine readable medium used for receiving digital data through an audio channel, the machine readable medium comprising: codes for extracting one or more types of sound parameters from received compressed sound; and codes for converting the extracted one or more types of sound parameters into the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 30, Harada teaches the medium of claim 29, further comprising: one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the codes for converting converts the extracted one or more types of sound parameters into the digital data in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 31, Harada teaches the apparatus for use in transmitting and receiving digital data through an audio channel, the apparatus comprising: means for converting digital data to be transmitted into one or more types of sound parameters; means for generating acoustic sound waves based on the one or more types of sound parameters; means for extracting one or more types of sound parameters from received

acoustic sound waves; and means for converting the extracted one or more types of sound parameters into the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

Harada, while teaching a sound analyzer that is configured to convert the one or more types of sound parameters into acoustic sound waves to acoustically transfer the digital data does not specifically teach a sound synthesizer coupled to the data coder. White et al., do teach a sound synthesizer that is coupled that is coupled to a transceiver that does extract speech parameters and receives and transmits acoustic data (Fig.2, items 28, 34 and 42). Therefore it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the processing component of White et al., in the apparatus of Harada, because this would provide the user with the capability to receive, and respond to, directions, commands, instructions, or requests issued verbally by the human user (White et al., Col.1, lines 36-38).

As per claim 32, Harada teaches the apparatus of claim 31, further comprising: means for storing one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the means for converting converts the digital data into the one or more types of sound parameters in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters, and wherein the means for converting converts the extracted one or more types of sound parameters into the digital data in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 33, Harada teaches the apparatus of claim 32, wherein the means for storing stores a look up table that predefines one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Col.9, line 24 – Col.10, line 62).

As per claim 34, Harada teaches a processor for use in transmitting digital data through an audio channel, the processor comprising: a processor circuit configured to :convert digital data to be transmitted into one or more types of sound parameters, and converting the one or more types of sound parameters into acoustic sound Waves to acoustically transfer the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 35, Harada teaches a processor for use in receiving digital data through an audio channel, the processor comprising: a processing circuit configured to: extract one or more types of sound parameters from received acoustic sound waves, and, convert the extracted one or more types of sound parameters into the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

Response to Arguments

5. Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see attached form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vijay B. Chawan whose telephone number is (571) 272-7601. The examiner can normally be reached on Monday Through Friday 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Vijay B. Chawan/
Primary Examiner, Art Unit 2626

vbc
7/24/08